

Remarks/Arguments

Claims 1-2, 4, 6-19, and 29-34 are pending in the present application.

Claims 1-2, 4-19, and 26-28 are rejected.

Claims 1-2, 7-8, 10-11, 14-17, and 19 are amended herein.

Claims 3, 5 and 20-28 are previously cancelled.

Claims 29-34 are new.

1. Information Disclosure Statement

a. *Information Disclosure Statement Filed February 3, 2006*

Applicants note that on an Information Disclosure Statement (“*IDS1*”) filed on or about February 3, 2006 and received by the United States Patent and Trademark Office (“*USPTO*”) on or about February 6, 2006, references J16 and J17 (“*REFS1*”) were crossed off. Further, Applicants note that on *IDS1* proximate to *REFS1*, the words “NOT PUBLIC” appear. To that end, Applicants assume *REFS1* were crossed off for allegedly containing serial numbers of United States patent applications filed with the USPTO.

Referring to 37 CFR § 1.98(a) it is stated “[a]ny information disclosure statement filed under [37 CFR] § 1.97 shall include...[a] list of all patents, publications, **applications** [emphasis added], or other information submitted for consideration by the Office.”

Further, referring to 37 CFR §1.98(b)(3) it is stated “[e]ach **U.S. application** [emphasis added] listed in an information disclosure statement must be identified by the inventor, application number, and filing date.”

To that end, Applicants respectfully contend that *REFS1* comport with the requirements of 37 CFR § 1.98(b)(3). Applicants submit herewith a Supplemental Information Disclosure Statement (“*SUPP IDS*”) having *REFS1* listed thereon. More specifically, references J16 and J17 are cited as references M5 and M6 of *SUPP IDS1* respectively.

b. *Information Disclosure Statement filed September 6, 2005*

Applicants note that on an Information Disclosure Statement (“IDS2”) filed on or about September 6, 2005 and received by the USPTO on or about September 8, 2005, references I51-I55, and I73 (“REFS2”) were crossed off. Further, Applicants note that on IDS2 proximate to REFS2, the words “NOT PUBLIC” appear. To that end, Applicants assume REFS2 were crossed off for allegedly containing serial numbers of United States patent applications filed with the USPTO.

Referring to 37 CFR § 1.98(a) it is stated “[a]ny information disclosure statement filed under [37 CFR] § 1.97 shall include...[a] list of all patents, publications, **applications** [emphasis added], or other information submitted for consideration by the Office.” Further, referring to 37 CFR §1.98(b)(3) it is stated “[e]ach **U.S. application** [emphasis added] listed in an information disclosure statement must be identified by the inventor, application number, and filing date.”

To that end, Applicants respectfully contend that REFS2 comport with the requirements of 37 CFR § 1.98(b)(3). Applicants submit herewith the SUPP IDS having REFS2 listed thereon. More specifically, references I51-I53 and I55 are cited as reference M1-M3 and M4 of SUPP IDS1, respectively, now United States patent application publications; and references I54 and I73 of IDS2 are cited as references M7 and M8, respectively.

2. Rejections under 35 USC § 112, 1st paragraph

In the Office Action, claims 1-2, 3-19, and 26-29 were rejected under 35 USC section 112, first paragraph as allegedly containing subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. More specifically, in the Office Action, it was stated, “[i]n claim 1, the applicant requires a diamond-like composition which minimizes adhesion to a material contact therewith.” Furthermore, in the Office Action it was stated, “the specification does not enable one skilled in the art to determine what materials would have minimized adhesion.”

Applicants respectfully contend that the materials that would have minimized adhesion are given antecedent basis in the specification. Referring to ¶ [0025] it is stated “[d]iamond-like compositions are characterized as a low surface energy material that exhibit release characteristics to cross-linked polymer material 36. Specifically, surface energies associated with DLC [diamond-like carbon] is in a range of 25 to 40 mN/m (milli-Newtons per meter)....The low surface energies associated with diamond-like compositions minimize the adhesion of cross-linked polymer material 36 to mold 27.” It is evident from the foregoing that the specification contains therein antecedent basis for what materials would have minimized adhesion, and more specifically, materials having surface energies in a range of 25 to 40 mN/m (milli-Newtons per meter).

As a result, it is respectfully contended that claims 1-2, 3-19, and 26-29 comport with the provisions of 35 USC section 112, first paragraph.

3. Rejections under 35 USC § 112, 2nd paragraph

a. *Rejection 1*

In the Office Action, claims 1-2, 3-19, and 26-29 were rejected under 35 USC section 112, second paragraph as allegedly being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. More specifically, Examiner states “[i]n claim 1, the limitations of ‘to minimize adhesion to a material in contact therewith’ is vague and confusing as there is no material in contact with the diamond like composition. The same issue applies to claims 10 and 16.”

To that end, Applicants have amended claims 1, 10, and 16 to clarify that the diamond-like composition is positioned on a body, forming the template, with the diamond-like composition providing the template with a predetermined surface energy to minimize adhesion to a material in contact with the template. As a result, it is evident that the adhesion is minimized between a material and the template, with the template comprising the diamond-like composition.

b. *Rejection 2*

In the Office Action, claims 1-2, 3-19, and 26-29 were rejected under 35 USC section 112, second paragraph as allegedly being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. More specifically, Examiner states “in claim 1, if the diamond-like carbon layer is between a material and a template, it appears that adhesion would inherently be minimized between the material and a template as they do not touch each other. It is the examiner’s position that no contact between materials is the ultimate in ‘minimized adhesion’. The same issue applies to claims 10 and 16.”

To that end, as mentioned above, Applicants have amended claims 1, 10, and 16 to clarify that the diamond-like composition is positioned on a body, forming the template, with the diamond-like composition providing the template with a predetermined surface energy to minimize adhesion to a material in contact with the template. As a result, it is evident that the template is in contact with a material, and further, the adhesion between the template and the material is minimized as a result of the template comprising a diamond-like composition.

As a result, it is respectfully contended that claims 1-2, 3-19, and 26-29 comport with the provisions of 35 USC section 112, second paragraph.

4. Rejections under 35 USC § 103(a)

In the Office Action, claims 1-2, 3-19, and 26-28 were rejected under 35 USC section 103(a) as allegedly being unpatentable over United States patent 6,607,173 to Westmoreland (“*Westmoreland*”).

a. Claim 1

Claim 1, as amended, defines a method of creating a template, the method including, *inter alia*, positioning a diamond-like composition on a body, forming the template, the diamond-like composition having properties sufficient to be substantially transmissive of a predetermined wavelength and provide the template with a predetermined surface

energy to minimize adhesion to a material in contact with the template; and patterning the diamond-like composition to include a plurality of protrusions and recesses.

Applicants advocate this method in order to improve the quality of the features defined in a material. See ¶ [0006]. More specifically, the invention of claim 1 includes positioning a diamond-like composition on a body, forming a template, the diamond-like composition including a plurality of protrusions and recesses. The diamond-like composition has properties to provide the template with a predetermined surface energy to minimize adhesion to a material in contact with the template. As a result, tearing or shearing of a layer formed from the material during separation of the template from the layer is less likely to occur while the diamond-like composition has a thickness to sufficiently form recesses having a desired depth to form the desired pattern. See ¶ [0025], ¶ [0026], and ¶ [0028].

Westmoreland is completely silent with respect to creating a template comprising a diamond-like composition having properties to minimize adhesion between the template and a material in contact with the template, with the diamond-like composition including a plurality of protrusions and recessions. Rather, Westmoreland is directed towards modifying a mold surface by forming a non-stick film on a planar surface of the mold and contacting a material to form a planar surface on a wafer. See column 2, lines 10-34. This is seen throughout the description of Westmoreland. More specifically, Westmoreland teaches modifying a *planar* [emphasis added] surface of a mold by coating or depositing a non-stick film thereon. See column 5, lines 37-40. A wafer is then pressed against the *planar* [emphasis added] surface of the mold such that a polymer material positioned on the wafer is pressed against the *planar* [emphasis added] surface of the mold. See column 6, lines 8-10. As a result, after solidification of the material and release from the *planar* [emphasis added] surface due to the non-stick film, the material has a *planarized* [emphasis added] outer surface. See column 6, lines 14-20. Westmoreland has no mention of the non-stick film having a plurality of protrusions and recessions. As a result, Westmoreland does not recognize the problem the Applicants address of minimizing tearing or shearing of layer during separation of the template from

the layer while the diamond-like composition has a thickness to sufficiently form recesses having a desired depth to form the desired pattern. This precludes Westmoreland from suggesting Applicants' claimed invention.

Furthermore, Westmoreland teaches away from the invention of claim 1 by teaching a mold having a planar surface. More specifically, as mentioned above, Westmoreland teaches modifying a *planar* [emphasis added] surface of a mold by coating or depositing a non-stick film thereon. See column 5, lines 37-40. To that end, were Westmoreland modified to include the invention of claim 1, and more specifically, were Westmoreland modified such that the non-stick film includes a plurality of protrusions and recessions, Westmoreland would not be able to planarize a material in contact with the mold, which is undesirable.

Based upon the foregoing, Applicants respectfully contend that a *prima facie* case of obviousness is not present with respect to claim 1, as amended.

b. Claims 10 and 16

Applicants respectfully contend that the arguments set forth above with respect to claim 1 applies with equal weight here and that claims 10 and 16, as amended, define an invention suitable for patent protection.

5. The Non-obviousness of the Dependent Claims

Considering that the dependent claims include all of the features of the independent claims from which they depend, these claims are patentable to the extent that the independent claims are patentable. Therefore, Applicants respectfully contend that the dependent claims define a system suitable for patent protection.

6. Conclusion

As a result of the foregoing, it is asserted by Applicants that claims 1-2, 4, 6-19, and 29-34 in the present Application are in condition for allowance, and Applicants respectfully request an allowance of such claims. Applicants respectfully request that the Examiner

call Applicant's agent at the below listed number if the Examiner believes that such a discussion would be helpful in resolving any remaining issues.

Respectfully Submitted,

A handwritten signature in black ink, appearing to read "MDPCA".

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